A theory of planned media choice

Hartmann, T.

published in
Media choice: A theoretical and empirical overview
2009

Chapter 3

Action Theory, Theory of Planned Behavior and Media Choice

Tilo Hartmann

Action theory regards people as decision-makers who follow intentions and voluntarily pursue their goals (Eccles & Wigfield, 2002). According to this theory, people may be affected by environmental and inner pressures and affordances, but ultimately behavior is guided by reflective, higher-order cognitive processes (Smith & DeCoster, 2000; Westerick, Renckstorf, Lammers, & Wester, 2006). People's higher-order cognitive processing responds to immediate "forces" such as internal drives or external pressures, but is not considered to be fully determined by them. Accordingly, action theory underlines the capability of people to cognitively ponder their environment and to run projections regarding various outcomes before they choose an option and undertake an action. A full explanation of media choice from the perspective of action theory involves the following three components: (1) it stresses users' decision-making (Frisch & Clemen, 1994; Marewski, Galesic, & Gigerenzer, this volume), which may include a likelihood-estimation and evaluation of possible rewards and costs (c.f., Eccles & Wigfield, 2002); (2) it highlights the way in which intentions are developed within the decision process; (3) it explicates how an intention is eventually implemented and shielded against competing action plans (Gollwitzer, 1990; Heckhausen & Beckmann, 1990); and (4) it thus tells how intentions result in actual behavior (Sheeran, Webb, & Gollwitzer, 2005).

A specific theoretical framework, which originated in social psychology and strongly builds on action-theoretical ideas, is the Theory of Planned Behavior (TOPB; Ajzen, 1988, 1991; see Ajzen & Fishbein, 2005, for an excellent summary; see for reviews, Armitage & Conner, 2001; Hagger, Chatzisarantis, & Biddle, 2002; Conner & Armitage, 1998; Sutton, 1998). TOPB can be understood as an extension of its precursor, the Theory of Reasoned Action (TRA; Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975; for a comparison of TRA and TOPB, see Madden, Ellen, & Ajzen, 1992). The scope of TOPB is—as already suggested by the labels "planned behavior" and "reasoned action"—predicting and explaining human behavior that is based on motivational choices and intentions.

This chapter discusses an application of TOPB to media choice. The first

section introduces the theory, defines the core scope of the theory, and discusses the potential boundaries of the scope. The second section reviews existing applications of TOPB to the realm of media choice, and the third section concludes the chapter with a review of the potential of TOPB to inspire research on media choice via discussing initial steps towards a theory of planned media choice.

General Assumptions of the Theory of Planned Behavior

TOPB is considered a general framework in which to explain and predict behavior that is, at least to a certain degree, under *volitional control* (Ajzen, 1991) and as such depends on a person's free will. The model does not predict behavior that is either completely determined by external forces or pressures (e.g., experiencing an accident) or that is under the complete command of autonomous mechanisms (e.g., getting ill, sneezing, compulsive behavior). TOPB explains behavior as an observable action (e.g., watching) defined by a specific situation (e.g., in the living room), linked to a specific target (e.g., the television) and restricted to a certain episode (e.g., within the next 14 days). The behavior may also occur repeatedly across similar situations (compound behavior; e.g., frequency of television use in the living room over the next 14 days).

According to TOPB, behavior is determined by the interaction (Ajzen, 1991, p. 188) of an *intention* (which indicates "how hard people are willing to try" (p. 181)) and the degree of *actual control* exerted over the behavior (p. 183). Behavior that is at least to certain a degree under volitional control will be performed if people really want to perform it and if they have the resources and abilities to do so. If the behavior is solely under volitional control (i.e., does not require any specific efforts, skills, or resources), its performance would depend entirely on one's intention.

According to TOPB, a person's *intention* to carry out a behavior builds on his/her motivational disposition, which entails three factors: (1) a favorable attitude toward the behavior (i.e., evaluating the behavior as good, healthy, worthwhile, valuable, etc.), (2) subjective norms (i.e., believing that important others will approve of conducting the behavior and even carry it out themselves), and (3) a perceived behavioral control over the behavior (i.e., believing that it is generally possible to carry out the behavior, and that one is able to carry it out; cf. Figure 3.1).

Each of these three factors (methodologically addressed as "direct measures") is thought to be a function of a specific set of people's expectancies and evaluations of *salient* outcomes or attributes (including costs) that people associate with a behavior (cf. "expectancy-value estimations," Eccles & Wigfield, 2002, p. 118; Marewski et al., this volume; Wolling, this volume; methodologically addressed as "indirect measures"). People's *attitude*

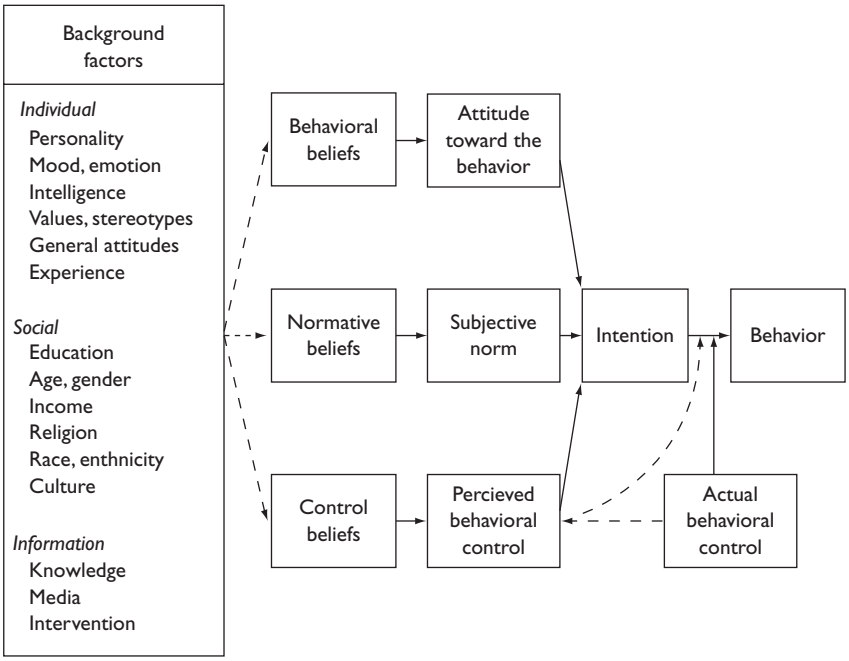

Figure 3.1 The theories of reasoned action and planned behavior (Ajzen & Fishbein, 2005, p. 194).

towards a behavior is a function of how likely they deem different outcomes associated with the behavior, and how desirable they find these outcomes (behavioral beliefs): people develop a favorable attitude towards the behavior if they perceive the outcomes to be both highly likely and desirable. People's *subjective norms* build on their beliefs about the normative expectations of relevant others and the motivation to comply with these expectations (normative beliefs). Subjective norms have a positive influence on behavior if people think that relevant others (friends, parents, classmates, etc.) appreciate the behavior or even pursue it themselves, and if people are at the same time willing to comply to their social surrounding.

It is commonly the case that behavior not only depends on people's will, but also on favorable external circumstances. The last of the three determinants outlined above, *perceived behavioral control*, therefore builds on the factors that people think may facilitate or impede the behavior, as well as the presumed power of these factors (control beliefs). Following TOPB, behavioral control is high if people consider it possible for them to carry out the behavior (cf. "self-efficacy," Bandura, 1997); that is, behavioral control is high if people think the expected circumstances will ease the behavior and/or if people believe they are capable of overcoming circumstances that they

expect to impede the behavior. A person may believe, for example, that playing a multiplayer video game ultimately depends on the circumstance that another player is available. Accordingly, the perceived control regarding the playing of a multiplayer game will be low if the person believes that no other player will be present.

At the Borders of TOBP: Automatic Behavior Under Volitional Control

Behavior is often elicited in a spontaneous, impulsive manner. Such behavior is said to be triggered *automatically* by environmental stimuli (Bargh & Barndollar, 1996). Automatic behavior is usually carried out in a mindless fashion; i.e., without conscious reflection. Media choices are also commonly automatic (Jaeckel, 1992; LaRose, this volume; Marewski et al., this volume). For example, after a hard day's work a tired person may become aware of the television set and feel an immediate drive to switch it on (cf. Fazio, 1990). She/he may pursue this "decision" with little reflection, switching on the TV somewhat mindlessly. If such automatic behavior reflects the fact that the person has successfully carried out the same action in the same context many times previously, it can be termed a habit (Oulette & Wood, 1998; Verplanken & Aarts, 1999). Mindless and automatic behavior, such as the habit of watching TV, seems to be the opposite of deliberative, conscious, and volitional behavioral conduct that falls within the scope of TOPB (cf. Connor & Armitage, 1998). In this context, it is appropriate to ask whether TOPB fails to explain and predict many instances of media choice.

According to TOPB, behavior is volitional if it depends on intentions. Many researchers stress the idea that intentions are elaborate and conscious plans of action that build on a symbolic interpretation of future situations (Smith & DeCoster, 2000). Higher-order cognitive processes are involved in the symbolic anticipation of the future, enabling one to pursue a free will; i.e., to disentangle environmental or inner stimuli from behavioral responses (Kuhl & Goschke, 1994). According to this view, behavior that follows intentions and that, as such, is under volitional control, requires *higher-order cognitive elaborations* (Smith & DeCoster, 2000); these elaborations are usually costly because they demand greater cognitive resources than automatic processes. People engage in such demanding cognitive processes only if a situation does not allow a reliance on more efficient, mindless responses (Fazio & Towles-Schwen, 1999). When making a decision, people engage in elaborate cognitive processes—particularly if the decision entails a considerable risk—because important goods or considerable investments are at stake (Esser, 1996; Fazio & Towles-Schwen, 1999); however, people can only engage in higher-order cognitive processes if the situation does not require urgent action, providing the time and opportunity to think before arriving at a decision (Fazio, 1990; Payne, Bettman, & Johnson, 1993).

In contrast, if people care little about the outcomes of a decision, if they do not have time to care, or if they are simply familiar with the decision and no longer need to care, decisions are more likely to be based on mindless processes than on higher-order cognitive elaborations. From this perspective, it seems that low-involvement, impulsive, or habitual media choices rest on environmental or inner forces that only trigger mindless mental processes, not elaborate cognitive thinking (e.g., "implicit attitudes," c.f., Wilson, Lindsey, & Schooler, 2000; "reduced impulse control," Tice, Bratslavsky, & Baumeister, 2001). Accordingly, automatic media choices would not depend on an intention, and therefore would not be covered by TOPB. The scope of TOPB would then be limited to media choices that are planned, as they involve a considerable risk because they are cost-intensive (e.g., deciding to go to the movies), tap crucial values or other important personal beliefs (e.g., deciding to watch a film about the Holocaust), and/or are simply unfamiliar (e.g., deciding to use a computer for the first time).

Does TOPB indeed fail to account for many instances of media choice, then? It may also be argued that automatic processes commonly build on the same motivational dispositions as those built upon by more deliberate processes. In addition, most automatic processes may remain under volitional control to a certain extent, as people willingly let them happen but may be able to intervene if desired.

One argument in light of this perspective is that spontaneous automatic behavior may result from automatically formed attitudes, normative beliefs and control beliefs, and an intention that is quickly established on-line (Ajzen & Fishbein, 2000). The cognitive association of action-relevant beliefs (i.e., the association of possible outcomes and the estimation of their likelihood and their evaluation) is not necessarily a conscious and elaborate process: people do not need to deliberately weigh the pros and cons associated with a behavior to make a decision and perform the behavior. As suggested by Ajzen and Fishbein (2000), behavioral attitudes, as well as normative and control beliefs, may form spontaneously after the outcomes and attributes associated with the behavior have come to mind automatically and subliminally. Subsequently, these spontaneously established and implicit beliefs may guide behavior (cf. Fazio, 1990). For example, after becoming aware of their television set, people may automatically associate watching television with an enjoyable and highly desirable mood-state. Based on this association, they may quickly form a positive attitude, followed by an intention to perform the behavior. Because the opportunity already exists, they may mindlessly turn on the TV (Fazio, 1990). Zapping (Bilandzic, this volume) and avoidance behavior (Fahr & Boecking, this volume) provide other examples of such spontaneous media choices.

Spontaneous automatic behavior may rest on automatically formed or implicit attitudes, norms and control beliefs that result in a quickly established intention to perform the behavior; however, Ajzen and Fishbein

(2000) proposed that a person's spontaneous motivational disposition forms neither arbitrarily nor heuristically, but is a function of existing associations (or beliefs; for a different opinion, see Marewski et al., this volume). Related media choices would still fall within the scope of TOPB, as "at the most basic level of explanation, the [theory] postulates that behavior is a function of salient information [...] relevant to the behavior" (Ajzen, 1991, p. 189). However, researchers need to capture a person's subjective associations that in general underlie his/her media choices; i.e., a person's salient (highly accessible) belief structure (Ajzen, 1991; Connor & Armitage, 1998). However, to the extent that a person's implicit and explicit motivational disposition diverges (Wilson et al., 2000), and automatically associated aspects or salient beliefs differ between real life and in survey situations, and to the extent that people evaluate and weigh different associated aspects in a contrasting fashion, TOPB may fail to provide an accurate model of spontaneous automatic behavior.

Research on *implementation intentions* (Gollwitzer, 1993, 1999) provides another argument as to why automatic behavior may still be affected by volitional control and intentions. Implementation intentions have the format of if–then plans: "If situation X arises, then I will do Y!" (Achtziger, Gollwitzer, & Sheeran, 2008, p. 381). Accordingly, "implementation intentions create a mental link between a selected cue or situation" (e.g., the television set) and "a goal-directed response" (e.g., watching TV, Achtziger et al., 2008, p. 381). If a critical cue is present, "the respective response is executed immediately and without further conscious intent" (Gollwitzer & Brandstaetter, 1997, p. 382).

Gollwitzer (1999) suggests that people form implementation intentions based on their *general* intentions (or goal intentions), which are thought to build on the determinants suggested in TOPB. General intentions reflect more of what a person wishes to do in the long-term, whereas implementation intentions focus more on the means to achieve a chosen long-term goal. For example, a person may form the general intention to withstand the pain of loneliness. She holds a positive attitude towards this behavioral goal, and her friends strongly support her efforts to withstand loneliness. Based on her general intention, she may form the implementation intention that whenever she feels the pain of loneliness at home, she will seek to distract herself by watching television. Accordingly, the person may automatically turn on the TV at home whenever she feels painfully lonely. In the same way that she has a positive attitude about her general goal to reduce the pain of loneliness, she is likely to have a positive attitude about watching TV because the behavior has instrumental value (Vroom, 1964), helping her to reduce loneliness. For the same reasons, she may think that important others approve of her watching TV, as they also support her efforts to relieve the feeling of loneliness.

The behavior described in this example is automatic and mindless, because the person routinely triggers the TV button whenever she feels lonely. The

person only relies on automatic behavior, however, because she developed an implementation intention as a means to fulfill her general intention. TOPB may predict both the person's general intention to reduce loneliness and the implementation intention to watch TV whenever she feels lonely (cf. Ajzen & Fishbein, 2005; Bamberg, Ajzen, & Schmidt, 2003, p. 185; Rise, Thompson, & Verplanken, 2003; Connor & Armitage, 1998); however, application of TOPB seems to be accurate only in the case that a person's general intention remains unchanged and thus remains in line with the derived implementation intention (Bamberg et al., 2003). If the original motivational disposition and thus the original general intention changes, however, a person's behavior may still follow an "out-dated" dragged-in implementation intention. In this case, a person may continue to mindlessly pursue behavior even if the behavior no longer has any instrumental value because the general intention has already changed and may now even be in conflict with the behavior (Ji Song & Wood, 2007).

Another category of behavior linked to implementation intentions is *habits*. Habits can be defined as "learned sequences of acts that have become automatic responses to specific cues, and are functional on obtaining certain goals or end-states" (Verplanken & Aarts, 1999, p. 104). A habit is a mental construct that relieves the brain as it passes on control over behavior to environmental stimuli (Verplanken, 2006). A habit not only includes an action routine, but also routinized decision-making (Betsch, Haberstroh, & Höhle, 2002). Some researchers argue that it is necessary for a behavior to have been conducted and successfully reinforced several times in the past (in similar situations) to establish a habit (Verplanken, 2006; Oulette & Wood, 1998). In contrast, others suggest that an implementation intention lies at the heart of every habit (Gollwitzer, 1999; Achtziger et al., 2008), implying that the basis of a habit can be established even before the behavior has ever been conducted.

It is commonly the case, however, that implementation intentions develop based on past experiences. For example, if a person learns that playing a certain video game in the evening at home causes a pleasurable rush of euphoria, she/he may form the implementation intention to play the video game again in a similar context in the future. The established implementation intention is probably stronger with increasing number of times that the behavior has been reinforced in the same context, and the more intense the repeated reinforcement (Verplanken, 2006).

If an implementation intention lies at the heart of a habit, the TOBP is also able to explain and predict habitual behavior. As argued above, however, a person's motivational disposition must remain in line with their behavioral conduct (cf. Bamberg et al., 2003). Habits are usually established by past behavior that was rewarded and thus reinforced. To the degree that a person's experienced reinforcement (e.g., a person's pleasure reactions) corresponds to his/her motivational disposition (i.e., his/her attitudes, subjective

norms, and perceived control over the behavior), TOPB should provide a reliable framework in which to predict habitual behavior. Such a correspondence between reinforcement and a person's motivational disposition is not unlikely: people may fail to develop a habit if they hold a negative attitude about the behavior or if the behavior is in conflict with their present subjective norms, as this would clearly undermine the rewarding quality of the behavior. Media habits that developed based on (and that remain linked to) a person's motivational disposition may be properly predicted by TOPB; however, habits sometimes change into bad habits with a change in the original disposition that formerly promoted the behavior. Such bad media habits appear to have turned beyond volitional control, and can therefore not be explained by the TOPB.

To a certain degree, persons may still correct their bad habits and align them to their motivational disposition. Habits are difficult to control (cf. Bargh & Barndollar, 1996; Ji Song & Wood, 2007); however, an established habit can be regulated if one is able to generate sufficient willpower. Bamberg et al. (2003) demonstrated that people start to intervene and to regulate their bad habits once their motivational disposition changes and their habits come into conflict with their changed attitudes, perceived social pressure, or behavioral control (see also Wood, Tam, & Guerrero Witt, 2005). For example, a person may appreciate TV because it helps him/her to calm down; accordingly, she/he may have established a habit of watching TV before going to bed. Consider the possibility that at some point the person reads a persuasive article about the negative effects of watching TV before going to bed, and she/he experiences a change in attitude accordingly. The person may now start to revise his/her habit and to regulate the automatic drive to watch TV before going to bed. That is, the person will seek to bring the behavior back under volitional control. To the degree to which a habit can be brought back under volitional control—this may be successful if the habit is not very strong or if the person directs sufficient effort to changing the habit—it will be successfully adjusted to the changed motivational disposition. TOPB would successfully predict such re-adjusted behavior.

TOPB will fail to predict habitual behavior to the extent that people fail to change their bad habits; i.e., if habitual behavior occurs even though an intention has developed to do otherwise (cf. Heckhausen & Beckmann, 1990). For example, Ji Song and Wood (2007) revealed that very strong habits of watching TV or consuming fast food can prevail over intentions to adjust the behavior (see also Verplanken & Wood, 2006); however, the difference between single behavioral acts and repeated behavior should be noted in this regard. TOPB is often applied to the prediction of behavior on an aggregate level (e.g., amount of TV watching over the next four weeks). While it seems plausible that a single instance of overt impulsive or habitual behavior may occur that is *not* in line with a person's motivational disposition, it seems less likely that such slip-ups would happen repeatedly over a

longer period, especially if the motivational disposition had changed substantially, resulting in a strong pressure to break the habit. In particular, people may succeed in regulating their behavior and adjusting it to their motivational disposition if the habit was relatively weakly developed. Accordingly, TOPB may explain particularly weak media habits or re-adjusted media exposure behavior, whereas it will fail to predict strong and bad media habits (Ajzen, 1991, 2002; Verplanken, Aarts, van Knippenberg & Moonen, 1998).

Outside the Borders of TOPB: Non-voluntary Automatic Behavior

While a habit can normally be regulated if a person invests enough effort to do so, behavior may also turn completely out of control and become *compulsive* (Loewenstein, 1996; "deficient self-regulation," LaRose, this volume). Compulsiveness can be defined as an inner urge or drive to perform a behavior that overrides a person's intention to stop it. Compulsive television use (McIlwraith, Jacobvitz, Kubey, & Alexander, 1991), Internet use (Young, 1998), and video-game use (Griffiths & Hunt, 1998) have been discussed previously in the literature. If media choice becomes compulsive, it can easily run counter to a person's motivational disposition. As stated by Berridge and Robinson (1995), a person may start to dislike the behavior, but nevertheless still feel a strong want to perform it; in this way, a person's liking and wanting may start to diverge. Therefore, compulsive media choice readily disentangles itself from attitudes, subjective norms, and considerations of behavioral control. Instead of a person's motivational disposition, environmental cues (e.g., the television set) or primes (e.g., action-related sensations or thoughts, such as a certain smell or mood) that co-occurred with the behavior in the past may trigger a want or urge to conduct the behavior. Compulsiveness commonly turns out to be problematic, as it may readily violate a person's attitudes, be in conflict with subjective norms, and come at an exceedingly high cost regarding a person's resources. Compulsive media choices are by definition outside the scope of volitional control, and are therefore beyond the scope of TOPB.

Past Applications of the Theory of Planned Behavior to Media Choice

In the past, TOPB has been used as a framework in which to explain and predict media choice in different research contexts. In particular, communication researchers involved in the Uses and Gratifications paradigm adapted the precursor of TOPB, the TRA (e.g., Babrow, 1989). Researchers studying users' appropriation of new media technology have also adapted the theoretical core of TOPB (cf. von Pape, this volume). Finally, psychologists,

although not particularly interested in media choice, have on occasions examined their genuine research questions related to TOPB in the context of media use (e.g., Doll & Ajzen, 1992).

Application of TRA/TOPB in Communication Research

In the 1980s, Uses and Gratifications researchers began to study media choice by incorporating the core ideas of TRA (Fishbein & Ajzen, 1975; Babrow, 1989; Babrow & Swanson, 1988; Blood & Galloway, 1983; Galloway & Meek, 1981; LaRose & Atkin, 1988; Palmgreen & Rayburn, 1982, 1983; Rayburn & Palmgreen, 1984; Van Leuven, 1981). One such core idea is the expectancy-value rationale, which argues that people's *attitude* regarding a behavior is a function of their likelihood estimations about certain experiential (e.g., happiness) or instrumental (e.g., money) outcomes multiplied by the subjective evaluation of each outcome (Fishbein & Ajzen, 1975). In turn, the attitude is considered a determinant of the intention to perform the behavior (Fishbein & Ajzen, 1975). Van Leuven (1981) and Galloway and Meek (1981) adapted the rationale of expectancy-value beliefs by arguing that the beliefs directly determine media exposure; indeed, in a small survey study the latter authors found that expectancy-value beliefs predicted exposure to television programs.

This idea was adopted and refined by Palmgreen and Rayburn (1982, 1983). In an initial survey study, Palmgreen and Rayburn (1982) applied expectancy-value beliefs to determine both users' attitudes about television news (measured by a single item: "Overall, how satisfied are you with the job television news programs do in providing you with the things you are seeking?") and users' gratifications sought from television news (i.e., "the general tendency to seek multiple gratifications [from the medium]," p. 568; e.g., "I watch TV news to keep up with current issues and events"). The authors stressed that users' expectancy beliefs can focus on both the *attributes* of a media offering (cf. Wolling, this volume) and the *behavioral outcomes* associated with the anticipated exposure. In contrast to TRA, which links attitudes to intentions that in turn precede actual behavior, they further argued that both the attitude and gratifications are the immediate determinants of actual news exposure. It remains unclear as to why intentions were not considered in the conceptualization. In their study, Palmgreen and Rayburn found that expectancy-value beliefs regarding TV news predicted about 30 percent of the variance of both users' sought gratifications and attitude about TV news. Users' perceived importance of each anticipated aspect or outcome added little to the predictive power of the expectancy-value term (but see also van der Pligt & de Vries, 1998). Only sought gratifications (and not users' attitude to TV news) were significantly linked to actual TV news exposure; however, sought gratifications only accounted for 5 percent of the variance of exposure to TV news. The approach adopted in measuring

attitude was also somewhat unusual (i.e., a single item about general satisfaction with TV news), thereby limiting the quality of the results (Babrow, 1989; Doll & Hasebrink, 1989).

A second survey study (Rayburn & Palmgreen, 1984) tested parts of the conceptualization that expectancy-value beliefs about TV news predict gratifications sought, which in turn lead to actual TV news exposure. Use of TV news, in turn, was thought to result in obtained gratifications, and the gratifications obtained by a user were thought to feed back to modify the expectancies (but not the evaluations) of attributes or behavioral outcomes associated with watching TV news. A major weakness of the survey, and despite the process character of the conceptualized model, was that it was conducted as a cross-sectional study. In addition, exposure to TV news was not assessed. The study results showed a significant correlation between expectancy-value beliefs and gratifications sought (and an even stronger correlation with gratifications obtained). In turn, gratifications obtained did indeed show a stronger correlation with users' expectancies than with their evaluations.

The link between expectancy-value beliefs and media exposure also inspired research by Babrow and colleagues (Babrow & Swanson, 1988; Babrow, 1989; Swanson & Babrow, 1989). The conceptualization of media choice suggested by Babrow and colleagues adapted TRA more carefully than the early approaches by Palmgreen and Rayburn. In an initial study, Babrow and Swanson (1988) applied a more valid measure of users' attitude and added a measurement of the intention to watch TV news. As in TRA, the intention to watch TV news was considered to rest on both users' attitudes and subjective norms about the behavior. In accordance with Palmgreen and Rayburn (1982), gratifications sought were also an object of analysis in the study; however, their role in the process of media choice remained somewhat unclear. A structural equation model was used to test the proposed relationships. Although the overall model showed a relatively poor fit, the result of statistically significant path coefficients confirmed the validity of the TRA: expectancy-value beliefs predicted attitude about TV news, the attitude predicted intention to watch TV news, and in turn the intention predicted actual exposure to TV news. A separate analysis, however, showed that subjective norms did not predict the intention to watch TV news.

Also in line with TRA, a second study by Babrow (1989) regarding the watching of daytime soap operas replicated the finding that users' attitudes towards TV watching are a function of expectancy-value beliefs. In turn, the attitudes affected users' intention to watch, and intention significantly predicted the actual amount of watching that took place. Normative beliefs were also assessed in the study, in an even more multi-faceted manner than that suggested by TRA; however, unlike the suggestion implicit in TRA, the measurement of subjective norms only considered what respondents believed

others would think about watching soap operas. The second component of subjective beliefs (i.e., respondents' motivation to comply with these expectations) remained unassessed. Still, normative beliefs exerted an influence on the intention to watch, although the effect was considerably smaller than that for attitude. In general terms, the study built upon firm theoretical grounds and led to several methodological advances. For example, the survey consisted of two waves: respondents were first asked about expectancy-value beliefs and their intention to watch soap operas over the next week; one week later they were asked about their actual viewing amount during the past week.

In summary, the above studies demonstrate that TRA provides a fruitful framework in which to study media choice, although some of the early studies were flawed (cf. Doll & Hasebrink, 1989). Surprisingly, despite these promising early steps the line of research ceased in communication research after the 1980s. Only a small number of more recent studies have sought to apply elements of TRA or TOPB to media choice. Of these, several focused almost entirely on expectancy-value theory, but did not apply the total structure of TRA or TOPB (e.g., for "news pagers," Leung & Wei, 1999; "TV prevention news stories," Cooper, Burgoon, & Roter, 2001). Other studies considered TOPB more thoroughly, but focused on users' intention to adopt a medium rather than actual media exposure (e.g., "intention to adopt the Internet," Chia, Detenber, & Lee, 2006; "intention to adopt text messaging services," Pedersen, & Nysveen, 20062; "intention to use virtual communities," Lin, 2006).

A revival of TRA/TOPB approach in communication research on media choice appears timely. Since the 1980s, TRA has been replaced by the more advanced conceptualization of TOPB, and several theoretical extensions (Conner & Armitage, 1989) and methodological improvements (Ajzen, 2006) have been suggested. Nabi and Krcmar (2004, pp. 297–299) suggested the use of TOPB in determining how attitudes are derived from media entertainment fare, and, in turn, predict future exposure to entertaining content. In a recent survey study, Hartmann and Vorderer (2006) applied TOPB in studying users' exposure to video games. Respondents' attitudes towards playing video games over the upcoming 14 days and their perceived behavioral control over playing games accounted for about 79 percent of the variance in the intention to play (subjective norms showed no effect; for similar findings, see Lin, 2006). In turn, respondents' intention predicted 23 percent of the variance of the actual amount of video game exposure measured 14 days later.

Application of TRA/TOPB to Media Choice in Other Scientific Domains

TOPB and its precursor, TRA, also inspired research on media choice in scientific domains other than communication research. The technology acceptance model (TAM; Davis, 1986; Davis, Bagozzi, & Warshaw, 1989;

Venkatesh & Davis, 2000; for overviews, see Venkatesh, Morris, Davis, & Davis, 2003; von Pape, this volume) provides one popular example. The TAM was developed as "an adaptation of TRA specifically tailored for modeling user acceptance of information systems" (Davis et al., 1989, p. 985). According to the original model, people hold a positive attitude towards using computer technology if they believe that the system is useful and easy to use. Perceived usefulness is defined as "the prospective user's subjective probability that using a specific application system will increase his or her job performance within an organizational context" (p. 985). Perceived ease of use is defined as "the degree to which the prospective user expects the target system to be free of effort" (p. 985). Departing from TRA, the original TAM further argued that the behavioral attitude (reflecting intrinsic rewards) and perceived usefulness (reflecting extrinsic rewards) predict the intention to use computer technology; subjective norms were not considered. An empirical test of the original model suggested that the conceptualization is more parsimonious if users' attitudes are neglected, and perceived usefulness and perceived ease of use are considered direct determinants of the intention to use computer technology. In a series of follow-up studies, Venkatesh and Davis (2000) further enhanced this model, demonstrating that in addition to perceived usefulness and perceived ease of use, the intention to use computer technology is affected by subjective norms.

A number of psychology-based studies that sought to either challenge or advance TOPB (e.g., Doll & Ajzen, 1992; Ouelette & Wood, 1998) or that used the model to pursue questions in applied research (e.g., Huang & Chuang, 2007; Doll, Petersen, & Rudolf, 2000) also shed light on media choice. For example, Doll and Ajzen (1992) examined the hypothesis that attitudes toward and perceived behavioral control of a behavior (e.g., using a medium) are more accessible and stable if they rest on a direct (e.g., using) rather than indirect (e.g., watching) experience with a behavioral object. The authors further examined how these behavioral beliefs, once developed, guide future behavior. To test their assumptions, they ran a laboratory experiment in which participants either watched or played six different video games, thereby forming behavioral beliefs about the playing of each game. At the end of the experiments, the participants had 45 minutes remaining to freely choose and play any game. The results showed that attitudes and behavioral control were indeed more accessible and stable if they resulted from the actual use of video games rather than merely watching the games. In turn, highly accessible behavioral beliefs affected the intention to play specific games in the 45-minute period of free time; again, intention and perceived behavioral control predicted the amount of actual exposure (see also Glasman & Albarracin, 2006).

Towards a Theory of Planned Media Choice

The reviewed studies demonstrate that TOPB, as well as its precursor TRA, provides a useful conceptualization within which to explore media choice; however, a concise and empirically corroborated theory of planned media choice has yet to be developed. Past applications of TOPB in the realm of media choice focused on a range of markedly different aspects: taken together, they do not represent a coherent line of research. Therefore, both theoretical and empirical progress is required to move ahead towards a theory of planned media choice.

Theoretical Progress

TOPB provides a powerful framework in which to predict voluntary human behavior. Despite the popularity of this theory in social psychology or health psychology, communication researchers involved in conceptualizing media choice have paid surprisingly little attention to the theory in the past. Uses and Gratification researchers took notice of TOPB's precursor, the TRA, but in general focused on expectancy-value mechanisms while neglecting any solid application of the entire framework to the realm of media choice. In addition, there exist few critical theoretical reflections of the genuine applicability of TOPB to media choice (cf. LaRose, this volume).

At its core, TOPB predicts behavior that is under complete volitional control (i.e., that builds on rather explicit and elaborate attitudes, subjective norms and control beliefs) and that results in a deliberate decision and the intention to conduct the behavior. Accordingly, TOPB should be especially capable in explaining and predicting any type of elaborate, planned or deliberate media choices. Media choices are likely to be planned if persons care about the decision because it involves a considerable risk (i.e., investment of time, money and other resources) for an uncertain outcome (Fazio, 1999; Esser, 1996; Payne et al., 1993). *Risky* media choices typically result in single behavioral acts, whereas repeated performance is more likely if the behavior is less risky (low investment costs and/or high certainty). The purchase of expensive media technology such as a computer or a television screen represents a typical example of a risky media choice; movie-going may provide another example that involves considerable risk. Media choices may also be risky, and therefore planned, if a person is highly unfamiliar with the choice and with anticipating behavioral outcomes. Next to the adoption of new media technology (cf. von Pape, this volume), other valid examples of risky media choices include choosing new software for the computer, deciding to become familiar with a new website or service on the Internet, and deciding to spent time playing a newly released video game. Seeking a certain show on television is also risky, especially if it is only broadcasted once at a specific time on a specific channel and therefore could be easily missed. All of the

above choices must be based on careful, conscious anticipations if they are to result in reasonable intentions and not a waste of considerable volitional effort. TOPB should provide a valid and useful framework in which to examine such media choices.

TOPB, however, is the subject of an ongoing discussion (cf. Conner & Armitage, 1998). This discussion must not be neglected on the path towards a theory of planned media choice. It may be discussed, for example, whether the expectancy-value mechanism proposed by TOPB is a valid conceptualization of elaborate choices (e.g., Luce, Payne, & Bettman, 2000; Wolling, this volume). References to decision theory may be helpful in substantiating the discussion (cf. Marewski et al., this volume; Payne et al., 1993). In addition, the behavioral determinants laid out in TOPB may prove to be insufficient in explaining all forms of media choices. For example, next to subjective norms (e.g., "important others dis/approve of me doing…"), personal moral norms may guide planned media choices (e.g., "I personally feel that I ought to do…"; Park & Smith, 2007).

In its current version, TOPB does not fully reflect the role of emotions that underlie the development of an intention; emotions may have a crucial impact on choices and planned media exposure (Loewenstein & Lerner, 2003), especially if the choice entails exposure to entertaining media. Furthermore, TOPB does not incorporate alternative choices (cf. Marewski et al., this volume), whereas people's media choices are commonly based on several available options (e.g., other leisure-time activities; Palmgreen & Rayburn, 1982, p. 574). For example, despite a favorable motivational disposition towards playing video games, people may still fail to form an intention to play if other more attractive alternatives exist.

Finally, TOPB primarily models the motivational stage of planned behavior (i.e., the development of an intention): the model tells us less about the volitional stage (i.e., how selected intentions are protected against other action plans and eventually result in actual exposure; Achtziger et al., 2008; Brandstaetter, Lengfelder, & Gollwitzer, 2001; Gollwitzer, 1990). For example, despite holding an intention to play video games, people may choose not to play because they are distracted by other interfering activities or duties. On the path towards a theory of planned media choice, researchers should carefully apply the core concept of TOPB without losing track of the ongoing debate about TOPB.

Future research should also explore the question of whether TOPB, despite its name, helps to illuminate media behavior that is somewhat less voluntary; i.e., behavior that rests on largely automatic choices and that is pursued in a mindless fashion. Media habits provide typical examples of such automatic behavior. TOPB may successfully explain such media behavior if it is analyzed as repeated behavioral conduct on an aggregate level (e.g., frequency of choosing to watch a TV soap opera within a period of 14 days). I suggested in this chapter that the motivational dispositions laid out in TOPB

may serve as a foundation on which to develop a media habit. Motivational dispositions that speak against a certain media choice make it less likely that the exposure will repeatedly take place; thus, the establishment of a media habit also becomes unlikely. Even if a media habit has become established, unfavorable motivational dispositions may urge a person to intervene in the behavioral conduct; however, the question of under what circumstances people may feel an urge to change a media habit, as well as under what conditions they fail or succeed to do so, remains open to discussion (cf. Ji Song & Wood, 2007). A careful consideration of socio-cognitive theory of media use (LaRose, this volume), particularly of the role of self-regulation, may be helpful in substantiating this discussion.

Empirical Progress

Past research that linked TRA or TOPB, or at least elements of both models, to the realm of media choice has led to promising results, yet few studies have appropriately adopted the full model of TOPB in predicting media choice. To develop proper assessments, researchers should consult the many recommendations made in the literature regarding how to assess the constructs of TOPB (Ajzen, 2006; Francis et al., 2004; Gagné & Godin, 2000). In general, TOPB is assessed by questionnaires, and any study should ideally include at least two waves. In the first wave, the standard constructs of TOPB are measured, including intensity or frequency of past behavior, along with the respondents' intentions to perform the same media behavior throughout a specified period in the future. After this period has elapsed, data are collected in a second wave, in which respondents are asked about how frequently or intensively they pursued the behavior. In addition, the second wave usually repeats the assessment of the constructs of TOPB (at least by applying the direct measures). Thus, test–retest reliabilities can be calculated to assess the psychometric qualities of the scales. Researchers may also test if respondents changed their motivational disposition and intention since wave 1.

Concluding Remarks

TOPB is one of the most mature and popular theories in social psychology in predicting human behavior. Sutton (1982) showed that TOPB usually predicts between 40 percent and 50 percent of the variance in intention and between 19 percent and 38 percent of the variance in behavior. In the past, application of TOPB to media choice in communication research and related disciplines did not move beyond insular efforts. It would therefore represent an innovative line of research to explain and predict media exposure based on TOPB. Such an emerging new theory on media choice may help to advance the existing body of knowledge on the topic, as it would enrich a healthy competition with other models that aim to predict people's media choices.

References

Achtziger, A., Gollwitzer, P. M., & Sheeran, P. (2008). Implementation intentions and shielding goal striving from unwanted thoughts and feelings. *Personality and Social Psychology Bulletin*, 34(3), 381–393.

Ajzen, I. (1988). *Attitudes, Personality, and Behavior*. Chicago: Dorsey Press.

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50, 179–211.

Ajzen, I. (2002). Residual effects of past on later behavior: Habituation and reasoned action perspectives. *Personality and Social Psychology Review*, 6, 107–122.

Ajzen, I. (2006). Constructing a TpB Questionnaire: Conceptual and Methodological Considerations. Online. Retrieved April 2007 from http://people.umass.edu/aizen/publications.html.

Ajzen, I. & Fishbein, M. (1980). *Understanding Attitudes and Predicting Social Behavior*. Englewood Cliffs, NJ: Prentice-Hall, Inc.

Ajzen, I. & Fishbein, M. (2000). Attitudes and the attitude-behavior relation: Reasoned and automatic processes. *European Review of Social Psychology*, 10, 1–33.

Ajzen, I. & Fishbein, M. (2005). The influence of attitudes on behavior. In D. Albarracín, B. T. Johnson, & M. P. Zanna (Eds.), *The Handbook of Attitudes* (pp. 173–221). Mahwah, NJ: Erlbaum.

Armitage, C. J. & Conner, M. (2001). Efficacy of the theory of planned behavior: A meta-analytic review. *British Journal of Social Psychology*, 40, 471–499.

Babrow, A. S. (1989). An expectancy-value analysis of the student soap opera audience. *Communication Research*, 16, 155–178.

Babrow, A. S. & Swanson, D. L. (1988). Disentangling the antecedents of audience exposure levels: Extending expectancy-value analyses of gratifications sought from television news. *Communication Monographs*, 55, 1–21.

Bamberg, S., Ajzen, I., & Schmidt, P. (2003). Choice of travel mode in the theory of planned behavior: The roles of past behavior, habit, and reasoned action. *Basic and Applied Social Psychology*, 25, 175–188.

Bandura, A. (1997). *Self-efficacy: The Exercise of Control*. New York: Freeman.

Bargh, J. A. & Barndollar, K. (1996). Automaticity in action: The unconscious as repository of chronic goals and motives. In P. M. Gollwitzer & J. A. Bargh (Eds.), *The Psychology of Action* (pp. 457–471). New York: Guilford.

Berridge, K. C. & Robinson, T. E. (1995). The mind of an addicted brain: Neural sensitization of wanting versus liking. *Current Directions in Psychological Science*, 4(3), 71–76.

Betsch, T., Haberstroh, S., & Höhle, C. (2002). Explaining and predicting routinized decision making: A review of theories. *Theory & Psychology*, 12, 453–488.

Blood, R. W. & Galloway, J. J. (1983). Expectancy-value measures of audience uses and gratifications for media content. Paper presented at the meeting of the International Communication Association, Dallas.

Brandstaetter, V., Lengfelder, A., & Gollwitzer, P. M. (2001). Implementation intentions and efficient action initiation. *Journal of Personality and Social Psychology*, 81(5), 946–960.

Chia, S. C., Li, H., Detenber, B. H., & Lee, W. (2006). Mining the Internet plateau: An exploration of the adoption intention of nonusers in Singapore. *New Media & Society*, 8(4), 589–609.

Conner, M. & Armitage, C. J. (1998). Extending the theory of planned behavior: A review and avenues for further research. *Journal of Applied Social Psychology*, 28, 1429–1464.

Cooper, P. C., Burgoon, M., & Roter, D. L. (2001). An expectancy-value analysis of viewer interest in television prevention news stories. Health Communication, 13, 227–240.

Davis, F. D. (1986). A technology acceptance model for empirically testing new end-user information systems: theory and results. Doctoral dissertation, Sloan School of Management, Massachusetts Institute of Technology.

Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). User acceptance of computer technology: A comparison of two theoretical models. *Management Science*, 35(8), 982–1003.

Doll, J. & Ajzen, I. (1992). Accessibility and stability of predictors in the theory of planned behavior. *Journal of Personality and Social Psychology*, 63, 754–766.

Doll, J. & Hasebrink, U. (1989). Zum Einfluß von Einstellungen auf die Auswahl von Fernsehsendungen. In J. Groebel & P. Winterhoff-Spurk (Eds.), *Empirische Medienpsychologie* (pp. 45–63). München: PVU.

Doll, J., Petersen, L., & Rudolf, M. (2000). Determinanten der Internetnutzung von Gymnasiasten und Studenten: eine Anwendung der Theorie geplanten und rollengesteuerten Verhaltens [Determinants of the Internet use of grammar school students and university students: An application of the theory of planned and role-guided behavior]. *Medienpsychologie*, 12, 5–22.

Eccles, J. S. & Wigfield, A. (2002). Motivational belief, values, and goals. *Annual Review of Psychology*, 53, 109–132.

Esser, H. (1996). Die Definition der Situation. *Kölner Zeitschrift für Soziologie und Sozialpsychologie*, 48, 1–34.

Fazio, R. H. (1990). Multiple processes by which attitudes guide behavior: The mode model as an integrative framework. In M. P. Zanna (Ed.), *Advances in Experimental Social Psychology* (pp. 75–109). San Diego: Academic Press.

Fazio, R. H. & Towles-Schwen, T. (1999). The MODE model of attitude-behavior processes. In S. Chaiken & Y. Trope (Eds.), *Dual Process Theories in Social Psychology* (pp. 97–116). New York: Guilford.

Fishbein, M. & Ajzen, 1. (1975). *Belief, Attitude, Intention, and Behavior: An Introduction to Theory and Research.* Reading, MA: Addison-Wesley.

Francis, H. H., Eccles, M. P., Johnston, M., et al. (2004). Constructing questionnaires based on the Theory of Planned Behavior: A manual for health services researchers. Online. Retrieved April 2007 from www.rebeqi.org/ViewFile.aspx?itemID=212.

Frisch, D. & Clemen, R. T. (1994). Beyond expected utility: Rethinking behavioral decision research. *Psychological Bulletin*, 116, 46–54.

Gagné, C. & Godin, G. (2000). The Theory of Planned Behavior: Some measurement issues concerning belief-based variables. *Journal of Applied Social Psychology*, 30(10), pp. 2173–2193.

Galloway, J. J. & Meek, F. L. (1981). Audience uses and gratifications: An expectancy value model. *Communication Research*, 8, 435–450.

Glasman, L. R. & Albarracin, D. (2006). Forming attitudes that predict future behavior: A meta-analysis of the attitude-behavior relation. *Psychological Review*, 132, 778–822.

Gollwitzer, P. M. (1990). Action phases and mind-sets. In E. T. Higgins & R. M.

Sorrentino (Eds.), *Handbook of Motivation and Cognition* (Vol. 2, pp. 53–92). New York: Guilford Press.
Gollwitzer, P. M. (1993). Goal achievement: The role of intentions. In W. Stroebe & M. Hewstone (Eds.), *European Review of Social Psychology* (Vol. 4, pp. 141–185). Chichester, England: Wiley.
Gollwitzer, P. M. (1999). Implementation intentions: Strong effects of simple plans. American Psychologist, 54, 493–503.
Gollwitzer, P. M. & Brandstaetter, V. (1997). Implementation intentions and effective goal pursuit. Journal of Personality and Social Psychology, 73, 186–199.
Griffiths, M. D. & Hunt, N. (1998). Dependence on computer games by adolescents. Psychological Reports, 82(2), 475–480.
Hagger, M. S., Chatzisarantis, N. L. D., & Biddle, S. J. H. (2002). A meta-analytic review of the theories of reasoned action and planned behavior in physical activity: Predictive validity and the contribution of additional variables. *Journal of Sport and Exercise Psychology*, 24, 3–32.
Hartmann, T. & Vorderer, P. (2006). Empirical evidence of expectancy-value structured entertainment choices. Presentation held at the 56th annual conference of the International Communication Association, ICA, Division "Mass Communication," June 19–23, Dresden.
Heckhausen, H. & Beckmann, J. (1990). Intentional action and action slips. *Psychological Review*, 97, 36–48.
Huang, E. & Chuang, M. H. (2007). Extending the theory of planned behavior as a model to explain post-merger employee behavior of IS use. *Computers in Human Behavior*, 23, 240–257.
Jaeckel, M. (1992). Mediennutzung als Niedrigkostensituation [Media use as a low-cost situation]. *Medienpsychologie*, 4, 246–266.
Ji Song, M. & Wood, W. (2007). Habitual purchase and consumption: Not always what you intend. *Journal of Consumer Psychology*, 17, 261–276.
Kuhl, J. & Goschke, T. (1994). A. theory of action control: Mental subsystems, modes of control, and volitional conflict resolution strategies. In J. Kuhl & J. Beckmann (Eds.), *Volition and Personality: Action Versus State Orientation* (pp. 93–124). Göttingen: Hogrefe.
LaRose, R. & Atkin, D. (1988). Satisfaction, demographic, and media environment predictors of cable subscription. *Journal of Broadcasting & Electronic Media*, 32(4), 403–413.
Leung, L. & Wei, R. (1999). Seeking News Via the Pager: An Expectancy-Value Study. *Journal of Broadcasting & Electronic Media*, 43, 1–17.
Lin, H. F. (2006). Understanding behavioral intention to participate in virtual communities. *CyberPsychology & Behavior*, 9, 540–547.
Loewenstein, G. (1996). Out of control: Visceral influences on behavior. *Organizational Behavior and Human Decision Processes*, 65, 272–292.
Loewenstein, G. & Lerner, J. S. (2003). The role of affect in decision making. In R. Davidson, H. Goldsmith, & K. Scherer (Eds.), *Handbook of Affective Science* (pp. 619–642). Oxford: Oxford University Press.
Luce, M. F., Payne, J. W., & Bettman, J. R. (2000). Coping with unfavorable attribute values in choice. *Organizational Behavior and Human Decision Processes*, 81, 274–299.
Madden, T. J., Ellen, P. S., & Ajzen, I. (1992). A comparison of the theory of

planned behavior and the theory of reasoned action. *Personality and Social Psychology Bulletin*, 18(1), 3–9.

McIlwraith, R., Jacobvitz, R. S., Kubey, R., & Alexander, A. (1991). Television addiction theories and data behind the ubiquitous metaphor. *The American Behavioral*, 35(2), 104–121.

Nabi, R. L. & Krcmar, M. (2004). Conceptualizing media enjoyment as attitude: Implications for mass media effects research. *Communication Theory*, 4(14), 288–310.

Oulette, J. A. & Wood, W. (1998). Habit and intention in everyday life: The multiple processes by which past behavior predicts future behavior. *Psychological Bulletin*, 124, 54–74.

Palmgreen, P. & Rayburn, J. D. (1982). Gratifications sought and media exposure: An expectancy value model. *Communication Research*, 9(4), 561–580.

Palmgreen, P. & Rayburn, J. D. (1983). A response to Stanford. *Communication Research*, 10, 253–257.

Park, H. S. & Smith, S. W. (2007). Distinctiveness and influence of subjective norms, personal descriptive and injunctive norms, and societal descriptive and injunctive norms on behavioral intent: A case of two behaviors critical to organ donation. *Human Communication Research*, 33, 194–218.

Payne, J., Bettman, J., & Johnson, E. (1993). *The Adaptive Decision Maker*. Cambridge: Cambridge University Press.

Pedersen, P. E. & Nysveen, H. (2002). Using the theory of planned behavior to explain teenagers' adoption of text messaging services. Working Paper, Agder University College.

Rayburn, J. D. & Palmgreen, P. (1984). Merging uses and gratifications and expectancy-value theory. Communication Research, 11, 537–562.

Rise, J., Thompson, M., & Verplanken, B. (2003). Measuring implementation intentions in the context of the theory of planned behavior. *Scandinavian Journal of Psychology*, 44, 87–95.

Sheeran, P., Webb, T. L., & Gollwitzer, P. M. (2005). The interplay between goal intentions and implementation intentions. *Personality and Social Psychology Bulletin*, 31, 87–98.

Smith, E. R. & DeCoster, J. (2000). Dual process models in social and cognitive psychology: Conceptual integration and links to underlying memory systems. *Personality and Social Psychology Review*, 4, 108–131.

Sutton, S. (1998). Predicting and explaining intentions and behavior: How well are we doing? *Journal of Applied Social Psychology*, 28(15), 1317–1338.

Swanson, D. L. & Babrow, A. S. (1989). Uses and gratifications: The influence of gratification-seeking and expectancy-value judgments on the viewing of television news. In B. Dervin, L. Grossberg, B. J. O'Keefe, & E. Wartella (Eds.), *Rethinking Communication: Paradigm Exemplars* (pp. 361–375). Newbury Park, CA: Sage.

Tice, D. M., Bratslavsky, E., & Baumeister, R. F. (2001). Emotional distress regulation takes precedence over impulse control: If you feel bad, do it! *Journal of Personality and Social Psychology*, 80, 53–67.

Van der Pligt, J. & de Vries, N. K. (1998). Belief importance in expectancy-value models of attitudes. *Journal of Applied Social Psychology*, 28(15), 1339–1354.

Van Leuven, J. (1981). Expectancy theory in media and message selection. *Communication Research*, 8, 425–434.

Venkatesh, V. & Davis, F. D. (2000). Theoretical extension of the technology acceptance model: Four longitudinal field studies. *Management Science*, 46(2), 186–204.
Venkatesh, V., Morris, M., Davis, G., & Davis, F. (2003). User acceptance of information technology: toward a unified view. *MIS Quarterly*, (27)3, 425–478.
Verplanken, A. & Wood, W. (2006). Interventions to break and create consumer habits. *Journal of Public Policy and Marketing*, 25, 90–103.
Verplanken, B. (2006). Beyond frequency: Habit as mental construct. *British Journal of Social Psychology*, 45, 639–656.
Verplanken, B. & Aarts, H. (1999). Habit, attitude, and planned behavior: Is habit an empty construct or an interesting case of automaticity? *European Review of Social Psychology*, 10, 101–134.
Verplanken, B., Aarts, H., van Knippenberg, A., & Moonen, A. (1998). Habit versus planned behavior: A field experiment. *British Journal of Social Psychology*, 37(1), 111–128.
Vroom, V. (1964). *Work and Motivation*. New York: Wiley.
Westerik, H., Renckstorf, K., Lammers, J., & Wester, F. (2006). Transcending uses and gratifications: Media use as social action and the use of event history analysis. *Communications*, 31(2), 139–153.
Wilson, T. D., Lindsey, S., & Schooler, T. Y. (2000). A model of dual attitudes. *Psychological Review*, 107(1), 101–126.
Wood, W., Tam, L., & Guerrero Witt, M. (2005). Changing circumstances, disrupting habits. *Journal of Personality and Social Psychology*, 88, 918–933.
Young, K. S. (1998). Internet addiction: the emergence of a new clinical disorder. *CyberPsychology & Behavior*, 3, 237–244.